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WHAT IS CLAIMED IS:

- A method for automatic adjustment of multiple bias
 potentials comprising:
- providing a system having a power supply with capabilities for monitoring biased components electrically connected to the power supply;
- attaching a biased component to a feedback signal to observe potential through a biased load;
- 8 comparing the feedback signal to an expected bias 9 potential; and
- controlling an output of the power supply in response to a feedback signal by adjusting the output of the power supply in response to the feed back signal.
- 2. The method of claim 1 wherein the comparing step further comprises comparing the feedback signal with a range of potentials as the expected bias potential.
 - 3. The method of claim 2 wherein prior the step of comparing is performed digitization and software-filtering step on the feedback signal are performed.
- 4. The method of claim 1 wherein the step of attaching further comprises attaching the feedback signal to a rotating connection on the biased load.
- 5. The method of claim 4 wherein the step of attaching further comprises a spring loaded carbon contact as the rotating connection.
- 6. The method of claim 1 wherein the step of providing
 further comprises providing the system as a networked system.

1	7. The method of claim 6 wherein the step of providing
2	further comprises the system having multiple imaging modules
3	attached to the power supply through multiple feed back signals.
1	8. The method of claim 7 wherein the step of attaching
2	further comprises attaching the feedback signals to multiple biased
3	components within each of the modules.
1	9. An integrated bias potential control and diagnostic system
2	for use within an electrophotographic imaging that allows for
3	automatic adjustment of multiple bias potentials and the sensing if
4	those potentials for the purpose of controlling and monitoring the
5	function of the imaging module comprising:
6	a) a networked system having facilities for controlling
7	and monitoring at least one imaging module with at least one
8	biased component;
9	b) a power supply having at least one control signal
10	operatively connected to the bias load feedback;
11	c) a feedback connection connected to the biased
12	load;
13	d) comparison means operatively connected to the
14	power supply for comparing the bias feedback signal to an
15	expected bias potential determined; and

means responsive to the comparison means for

taking corrective action when the bias feedback does not match

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e)

the expected bias potential.

1	10. The system of claim 9 further comprising:
2	the means responsive to the comparison means further
3	comprising a bias error signal provided from the power supply
4	to a machine control system; and
5	a software-filtering module that applies a predetermined
6	set of parameter to the bias error signal to determine if an error
7	should generated.
1	11. A method for detecting error conditions within a biased
2	load:
3	providing a system having a power supply operatively
4	configured to monitor biasing of components;
5	attaching a feedback signal to the power supply that
6	observes current traveling from the power supply and through
7	the biased component;
8	comparing the feedback signal to a set of predetermined
9	parameters; and
10	responding to the comparing step to determine the
1	existence of an undesirable condition.
1	12. The method of claim 11 wherein the step of responding
2	further comprises determining the existence of one of the following:
3	(open load, over load, shorted load intermittent contact with the load,
4	arcing conditions, or power supply output failure) as the undesirable
5	condition.
1	13. The method of claim 11 wherein the step of responding
2	further comprises controlling an output of the power supply in
3	response to a feedback signal by adjusting the output of the power
4	supply in response to the feed back signal.

- 1 14. The method of claim 11 wherein the step of comparing
- 2 further comprises sensing the feedback signal by either interrupt or
- 3 sampling prior comparing.
- 1 15. The methods of claim 11 wherein the step of responding
- 2 further comprises a step of software filtering of the feedback signal.
- 1 16. The method of claim 15 wherein the step of software
- 2 filtering further comprises a step of digital filtering the feedback signal
- 3 to determine if an error state exist, the step of digital filtering further
- 4 comprising sampling the feedback signal for a predetermined number
- 5 of consecutive samples.
- 1 17. The method of claim 15 wherein the step of software
- 2 filtering further comprises the step sampling the feedback signal to
- 3 determine if a biasing error exists and determining if the biasing error
- 4 is significant then instructing the system to shutdown.
- 1 18. The method of claim 11 wherein the step of providing
- 2 further comprises as one of the monitored components a toning roller
- 3 and the step of responding further comprises adjusting bias level to
- 4 control a toner biasing level for the toning roller.
- 1 19. The method of claim 18 wherein the biasing levels are set
- 2 as part of the electrophotographic process control including a DC bias
- 3 level of the toning roller bias to control toning density and an AC
- 4 component of the bias per a predetermined ratio relative to the DC
- 5 bias set point.
- 1 20. The method of claim 19 wherein the toning density is
- 2 monitored by a transmission densitometer in the system.